

## Two Species of the Genera *Cladothela* and *Trachyzelotes* (Araneae: Gnaphosidae) from Yaeyama Islands, Southwest Japan

Takahide KAMURA<sup>1)</sup>

加村隆英<sup>1)</sup>：八重山諸島産エダイボグモ属及びタイリクケムリ

グモ属（クモ目：ワシグモ科）の2種

**Abstract** Two gnaphosid species are reported from Yaeyama Islands, Okinawa Prefecture, Southwest Japan; *Cladothela austera* sp. nov. is described and *Trachyzelotes kulczynskii* (BÖSENBERG, 1902) is recorded as a new member of the Japanese fauna.

In the present paper, I deal with two gnaphosid spiders collected from Yaeyama Islands, Okinawa Prefecture, Southwest Japan. Of these, one species belonging to the genus *Cladothela* is new to science, and the other one, *Trachyzelotes kulczynskii* (BÖSENBERG, 1902), is new to the Japanese fauna.

The genus *Cladothela* is characterized by having a large spine on retrolateral side of male palpal femur (KAMURA, 1991, figs. 8, 28 & 29). The presence of the conspicuous spine is a unique character in the family Gnaphosidae. Up to this time, four species of this genus were known from Japan: *C. boninensis* KISHIDA, 1928, *C. oculinotata* (BÖSENBERG et STRAND, 1906), *C. unciinsignita* (BÖSENBERG et STRAND, 1906) and *C. parva* KAMURA, 1991 (KAMURA, 1991). The present new species is closely related to *C. oculinotata*.

On the other hand, the genus *Trachyzelotes* is one of the *Zelotes* complex which is characterized by having a preening comb on each ventrodistal end of matatarsi III and IV, and is separated from the other genera of the complex by having stiff bristles on anteromedian surface of chelicerae (PLATNICK & MURPHY, 1984, fig. 1). *Trachyzelotes jaxartensis* (KRONEBERG, 1875) was the only known species of the genus from Japan up to this time (YAGINUMA et al., 1990). *Trachyzelotes kulczynskii* (BÖSENBERG, 1902), the newly recorded species from Japan, was known from Germany, Yugoslavia, Bulgaria, Romania, United States (Florida), Jamaica, Saint Christopher and Nevis (St. Kitts), Colombia and Samoa (BRAUN, 1982; PLATNICK & MURPHY, 1984; MÜLLER, 1994). It is reported from East Asia for the first time.

The type specimens of the new species described in the present paper are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo. The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye. Eye size means the length of long axis of an eye, but the measurement of posterior median eye was made at the horizontal level.

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1) Biological Laboratory, Otemon Gakuin University, 2-1-15, Nishi-Ai, Ibaraki, Osaka, 567 Japan  
追手門学院大学生物学研究室 〒567 茨木市西安威2-1-15

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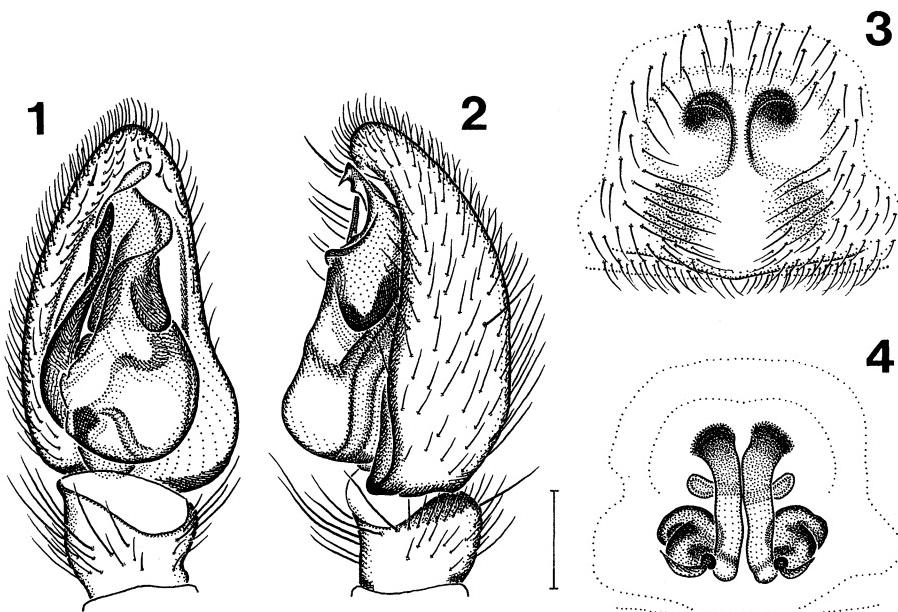
High School, Kamakura, Kanagawa, for his offering invaluable specimens.

***Cladothela austera* sp. nov.**  
(Figs. 1-4)

Description (based on the male holotype and the female allotype). Measurements (in mm). Body length ♂ 5.95, ♀ 7.55. Carapace length ♂ 2.80, ♀ 2.65, width ♂ 2.20, ♀ 2.15. Abdomen length ♂ 3.15, ♀ 4.90; width ♂ 2.00, ♀ 2.90. Eye sizes: AME ♂ 0.14, ♀ 0.14; ALE ♂ 0.17, ♀ 0.17; PME ♂ 0.17, ♀ 0.15; PLE ♂ 0.15, ♀ 0.14. Distances between eyes: AME-AME ♂ 0.06, ♀ 0.07; AME-ALE ♂ 0.02, ♀ 0.02; PME-PME ♂ 0.02, ♀ 0.02; PME-PLE ♂ 0.06, ♀ 0.06; ALE-PLE ♂ 0.06, ♀ 0.06. MOA anterior width ♂ 0.32, ♀ 0.33; posterior width ♂ 0.36, ♀ 0.32; length ♂ 0.39, ♀ 0.39. Clypeus height ♂ 0.13, ♀ 0.12. Length of legs as shown in Table 1.

Table 1. Measurements of legs of *Cladothela austera* sp. nov.  
(♂/♀; in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.00/1.85	1.15/1.10	1.45/1.35	1.14/0.98	0.90/0.73	6.64/6.01
II	1.76/1.65	1.05/1.00	1.23/1.18	1.05/0.93	0.83/0.70	5.92/5.46
III	1.45/1.35	0.78/0.78	0.93/0.90	1.06/1.03	0.70/0.63	4.92/4.69
IV	2.10/1.98	1.08/1.05	1.53/1.46	1.75/1.71	0.88/0.80	7.34/7.00



Figs. 1-4. *Cladothela austera* sp. nov. (male holotype and female allotype). — 1. Left male palp, ventral view. 2. Same, retro-lateral view. 3. Epigynum, ventral view. 4. Female genitalia, dorsal view. (Scale: 0.2 mm.)

Chelicera with two ( $\sigma$ ) or three ( $\varphi$ ) teeth on promargin of fang furrow; no tooth on retromargin; fang flattened, sinuous. Endite densely covered with short stiff bristles on ventral surface. Legs I and II without ventral spine on tibiae and metatarsi. Female median spinneret with many (20 or 21) spigots on dorsal swelling. Male palp (Figs. 1–2): Embolus almost straight, relatively thick; femur with a large spine on retrolateral side. Epigynum with a longitudinal ridge on middle part (Fig. 3). Female genitalia with a pair of longitudinal thick ducts (Fig. 4).

Color ( $\sigma$  and  $\varphi$ ). Cephalothorax and appendages wholly dark reddish brown, but metatarsi and tarsi of legs lighter. Abdomen dark brown, but ventral surface lighter.

Variation. Male. 1  $\sigma$  other than the holotype: Body length 4.10 mm; carapace length 1.95 mm, width 1.45 mm. Chelicera with three teeth on promargin of fang furrow. This specimen is somewhat lighter in color than the holotype.

Female. Body length 6.20 – 9.05 mm; carapace length 2.55 – 3.50 mm, width 2.03 – 2.83 mm. Chelicera with two or three teeth on promargin of fang furrow. Median spinneret with 17 – 26 spigots on dorsal swelling.

Type series. Holotype:  $\sigma$ , NW of Ôhara, Iriomotejima Island, Okinawa Pref., Japan, 28.II.1992, Takahide & Takae KAMURA leg. (NSMT-Ar 3457). Allotype:  $\varphi$ , Tsukigahama, Urauchi, Iriomotejima Island, Okinawa Pref., Japan, 6.III.1994, T. & T. KAMURA leg. (NSMT-Ar 3458).

Other specimens examined. Okinawa Pref.: Ishigakijima Island: 1  $\sigma$ , Takeda Botanical Garden, Tonoshiro, 29.II.1992 (matured on 13.VII.1992), T. & T. KAMURA leg. Iriomotejima Island: 2  $\varphi$ , 21.II.1993; 1  $\varphi$ , 25.II.1993; 1  $\varphi$ , 6.III.1994, same locality and collectors as for the allotype. Haterumajima Island: 1  $\varphi$ , southwestern part of the island, 27.X.1996, T. & T. KAMURA leg.; 8  $\varphi$ , central part of the island (near Nagata-Utaki), 19.III.1997, T. & T. KAMURA leg.

Distribution. Japan (Yaeyama Islands: Ishigakijima Is., Iriomotejima Is. and Haterumajima Is.).

Remarks. This species is closely related to *C. oculinotata* (BÖSENBERG et STRAND, 1906) in having flattened cheliceral fang and endite covered with short, stiff bristles (see KAMURA, 1991, figs. 22–25), but is separated from the latter by the thick embolus in male palp and by the longitudinal thick ducts in female genitalia.

Etymology. The specific name meaning the south wind is a noun in apposition.

### *Trachyzelotes kulczynskii* (BÖSENBERG, 1902)

(Figs. 5–8)

*Prosthesima kulczynskii* BÖSENBERG, 1902, p. 313, pl. 29, figs. 463A, B.

*Zelotes kulczynskii*: REIMOSER, 1919, p. 168.—ROEWER, 1954, p. 451.—BONNET, 1959, p. 4929.

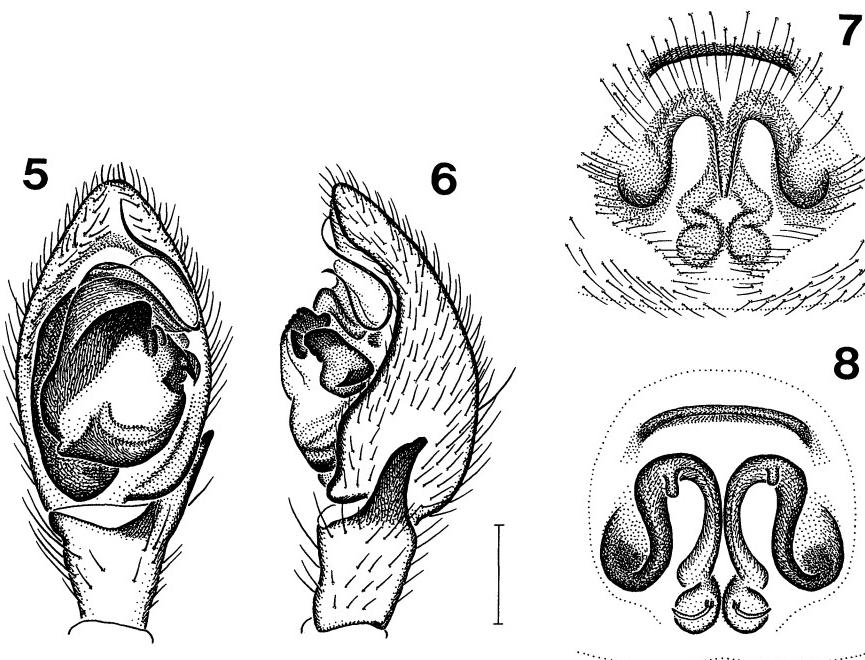
*Trachyzelotes kulczynskii*: PLATNICK & MURPHY, 1984, p. 13, figs. 23–26.—PLATNICK, 1989, p. 487.—MÜLLER, 1994, p. 143.

*Zelotes samoensis* BERLAND, 1934, p. 325, figs. 7–8.—ROEWER, 1954, p. 467.—BONNET, 1959, p. 4949. [Synonymized by PLATNICK & MURPHY (1984).]

Description (based on 1  $\sigma$  and 1  $\varphi$  from Ishigakijima Island). Measurements (in mm). Body length  $\sigma$  4.18,  $\varphi$  6.03. Carapace length  $\sigma$  1.83,  $\varphi$  2.13, width  $\sigma$  1.50,  $\varphi$  1.73. Abdomen length  $\sigma$  2.35,  $\varphi$  3.90; width  $\sigma$  1.43,  $\varphi$  2.15. Eye sizes: AME  $\sigma$  0.10,

Table 2. Measurements of legs of *Trachyzelotes kulczynskii* (BÖSENBERG, 1902) ( $\sigma$  /  $\varphi$ ; in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.42/1.60	0.86/1.04	1.06/1.20	0.94/1.05	0.74/0.82	5.02/5.71
II	1.22/1.39	0.72/0.88	0.86/0.98	0.82/0.93	0.64/0.71	4.26/4.89
III	1.06/1.22	0.58/0.73	0.72/0.85	0.82/0.95	0.55/0.63	3.73/4.38
IV	1.56/1.78	0.86/1.02	1.22/1.40	1.39/1.58	0.72/0.83	5.75/6.61



Figs. 5-8. *Trachyzelotes kulczynskii* (BÖSENBERG, 1902) (Ishigakijima Island). — 5. Left male palp, ventral view. 6. Same, retrolateral view. 7. Epigynum, ventral view. 8. Female genitalia, dorsal view. (Scale: 0.2 mm.)

$\varphi$  0.13; ALE  $\sigma$  0.14,  $\varphi$  0.17; PME  $\sigma$  0.14,  $\varphi$  0.15; PLE  $\sigma$  0.12,  $\varphi$  0.13. Distances between eyes: AME-AME  $\sigma$  0.06,  $\varphi$  0.06; AME-ALE  $\sigma$  0.01,  $\varphi$  0.01; PME-PME  $\sigma$  0.02,  $\varphi$  0.04; PME-PLE  $\sigma$  0.03,  $\varphi$  0.04; ALE-PLE  $\sigma$  0.04,  $\varphi$  0.03. MOA anterior width  $\sigma$  0.25,  $\varphi$  0.30; posterior width  $\sigma$  0.30,  $\varphi$  0.34; length  $\sigma$  0.30,  $\varphi$  0.32. Clypeus height  $\sigma$  0.11,  $\varphi$  0.15. Length of legs as shown in Table 2.

Legs I and II without ventral spine on tibiae and metatarsi. Male palp, epigynum and female genitalia as shown in Figs. 5-8.

Color ( $\sigma$  and  $\varphi$ ). Cephalothorax and appendages dark reddish brown. Abdomen blackish brown.

Variation. Body length  $\sigma$  3.65 - 4.28 mm,  $\varphi$  4.20 - 6.03 mm. Carapace length  $\sigma$  1.60 - 1.83 mm,  $\varphi$  1.80 - 2.13 mm; width  $\sigma$  1.35 - 1.50 mm,  $\varphi$  1.45 - 1.73 mm.

Specimens examined. Okinawa Pref.: Ishigakijima Island: 5  $\sigma$  1  $\varphi$ , 29.II.1992 (1)

♂ and 1 ♀ matured on 13 and 19.III.1992 respectively); 3 ♀, 26.II.1993 (1 ♀ matured on 26.III.1993), Takeda Botanical Garden, Tonoshiro, T. & T. KAMURA leg. Iriomote-jima Island: 1 ♀, 14.VIII.1985; 1 ♀, 28.III.1986, Ôtomi, A. TANIKAWA leg. Yonaguni-jima Island: 2 ♀, near Sanninu-dai, 17.III.1997 (1 ♀ matured on 21.III.1997), T. & T. KAMURA leg.; 1 ♂, near the entrance of Yonaguni Airport, 18.III.1997 (matured by 9.IV.1997), T. & T. KAMURA leg.

Distribution. Japan (Yaeyama Islands: Ishigakijima Island, Iriomotejima Island and Yonagunijima Island); Germany, Balkans, Caribbean and Samoa. According to PLATNICK & MURPHY (1984), this species is natively distributed in Balkan, and is introduced into the other areas.

### 摘要

沖縄県八重山諸島から得られた標本に基づいて、ワシグモ科エダイボグモ属の1新種を *Cladothela auster* sp. nov. ハエミノチャクロワシグモ（南風見の茶黒鷺蜘蛛、新称）と命名して記載し、ワシグモ科タイリクケムリグモ属の1種、*Trachyzelotes kulczynskii* (BÖSENBERG, 1902) ナンゴクケムリグモ（新称）を日本新記録種として報告した。

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